

Work Order ID 61567

Monday, August 30, 2010 11:24:08 AM



Page 1

Item ID: D350-636-011

Accept



Setup Start



Revision ID:

Stop



Item Name: Skidtube LH

Start Date: 8/30/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 9/6/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: K

Date: 10-8-30 Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2750	Rev F								

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy blue file and type labels per PPP D350-636-011 CHG 005

8/10/08/23

1361567

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

110

0.00



Skidtubes

Skidtubes

0.00

Skidtubes

Memo

1- Pick D2600-3 Bent

2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D2750

3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500", deburr.

4- Locate DT8330 off of blade fitting bolt holes and drill pilot holes for blade fitting

5- Drill fwd step holes using DT9616. Ensure proper positioning.

6- Drill pilot holes as per Dwg D2750 sheet 4 (D2750-1 details). Drill using drill Jig DT8150 & DT8863A for first side only DT8863B for second side (detail B)
ONLY DRILL ONE SIDE OF FWD SADDLE HOLES USING DT81507- Clecko DT8863B on second side of tube and drill pilot holes for detail B.
SECOND SIDE

8- Clecko DT9642 and drill fwd saddle holes on second side, ensure proper positioning.

9- Open up holes for Detail B to 0.375" (4 holes per side) and blade fitting location holes to 0.500" (total of 4 holes per side) as per dwg D2750. Open up holes for ground handling and detail C to 0.500" (8 holes per side)

10- Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

0.297"

11-Open up holes of Detail A to 0.297" (total of 2 holes per side)

12-Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left from bending as per QSI 004

A/R Aluminum Rod batch: ☐

13-Grind welds flush as per Dwg D2750

> DP 10-8-31

BE 10/09/01

DP 10-9-2

120



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

1005-2

130



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

1009-2

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Customer:

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140



HandFinish

Chemical Conversion Coat per QSI005 4.1

0.00

DP 10-9-7

Memo

0.00

Hand Finishing

150



QC

QC3- Inspect Part Finish

0.00

BE

x1 - BE10-09-07

Memo

0.00

Quality Control

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 	Skidtubes	0.00							
Skidtubes	Memo 1-Open up holes of Detail C and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750. 2-Open up holes of Detail B to 0.750" (total of 4 holes per side) as per dwg D2750. 3- Open float hole to 0.500" (4 per side) 4-Chamfer holes of Detail B, C, ground handling and float holes per dwg D2750 (welding instructions on sheet 8) 5-Deburr and blow out all chips from inside of tube 6- Prepare tube for welding, remove alodine as required. 7-Bond web D2739 in place as per QSI 015 A/R <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Sikaflex-291 batch: <u>115114</u> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> exp. date: <u>11/01/30</u> 8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 8) A/R <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Aluminum Rod batch: <u>M114877</u> 9- At section AJ-AJ drill out x-bolt spacer to 0.404" 10-Grind welds flush as per Dwg D2750	0.00							

10-9-7

(N) BB

10/09/08

BE 10/09/12

BE 10/09/13

10/09/14

DP/BB

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Customer:

Reference:

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp11-Spot face ground handling holes section (total of 4 places per side) as per
dwg D2750

BE 10/09/14

12-Debur holes

BE 10/09/14

170



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

S 10/09/15

Memo

0.00

180



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

S 10/09/15

Memo

0.00

(X2)

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Customer:

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190



HandFinish

Hand Finishing

Pressure Wash per QSI005 4.3

0.00

⇒ JH 10/09/15

Memo

0.00

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

1 ~~0~~

200



Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

11114841

⇒ JH 10/09/15

Memo

0.00

START TIME: 1:00pm
OVEN TEMPERATURE: 320° F
FINISH TIME: 1:20pm1 ~~0~~

210



QC

Quality Control

QC3- Inspect Part Finish

0.00

BL 10-9-21

Memo

0.00

Inspect for foreign object per QSI 024

0

W/O:		WORK ORDER CHANGES					
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

220



HandFinish

HandFinishing

0.00

Hand Finishing

Memo

0.00

✓ Install inserts as per Dwg D2750

⇒ JH 10/09/21

1 0

230



HandFinish

HandFinishing

0.00

Hand Finishing

Memo

0.00

✓ 1-Inspect for Foreign Objects

✓ 2-Spray inside of tube with "LPS-3" batch: N/A

3-Install blade fitting D3488-041, wearshoes and ground handling hardware as per dwg D2750

✓ SIKA FLEX 241
BATCH: 11115114
EXP DATE: 11101✓ 4-assemble o-ring to plug as per dwg D3492 and apply o-ring lube
A/R 55-o-ring lube batch: 11114189

✓ 5-Coat all exposed fasteners with "LPS Procyon" batch: 11114596

⇒ JH 10/09/21

1 0

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Reference:

Cust Item ID:

Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

240



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

0.00

Memo

8/30/22

250



Packaging

Packaging

Pick Kit

0.00

0.00

Memo

10/9/22

260



QC

Quality Control

QC4- 100% Inspect kits for completeness

0.00

0.00

Memo

8/30/23

*****ensure antiseize is on AN8C21A bolts*****

W/O:		WORK ORDER CHANGES					
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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270	Packaging	0.00							
	<i>1 sec 72</i>								
Packaging	Memo	0.00							
Packaging	Package as per PPP D350-636-011								
280	QC21- Final Inspection - Work Order Release	0.00							
QC	Memo	0.00							
Quality Control									

*10/10/27**10/09/27**MF
10-9-27*

W/O:		WORK ORDER CHANGES					
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Picklist Print

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Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 8/30/2010


Required Date: 9/6/2010

Start Qty: 1.00


Required Qty: 1.00

Comments: IPP Rev: I 02.09.25 Rearranged procedure steps KJ
 IPP Rev: J 06-03-23 As per Rev D JLM
 IPP Rev: K 06-07.13 As per dsi9343 EC
 IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC
 IPP Rev: M 08-04-22 update steps 4, 13 DD verified by: EC
 IPP Rev: N 08-09-23 revF as per dwg DD verified by: ec
 IPP Rev: O 09-02-06 apply antiseize on AN8C21A bolts as per PAR09-010
 DD verified by: EC IPP Rev: P 10.06.22
 revise seq110 DD verf: EC


Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2594-3  O-Ring, 205 Skidtube		Manufactured	No			230	Each	211.0000	8	8		10/09/21	
---	--	--------------	----	--	--	-----	------	----------	---	---	--	----------	--

Location	Loc Qty	Loc Code
FP	211	
55546	19	
58191	12	
59358	180	

D2744  Cap		Manufactured	No			110	Each	27.0000	1	1			
--	--	--------------	----	--	--	-----	------	---------	---	---	--	--	--

Location	Loc Qty	Loc Code
LG	27	
59198	27	

D2600-3-BENT  Extrusion Bent		Manufactured	No			110	Each	9.0000	1	1		10/07/01	
--	--	--------------	----	--	--	-----	------	--------	---	---	--	----------	--

Location	Loc Qty	Loc Code
LG	9	
59410	9	

B 61633

①



10-8-31

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Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

D2743

Manufactured No

160

Each

211.0000

8

8



Crossbolt Spacer



Location

Loc Qty

Loc Code

LG

211

50281

10

57953

2

59111

199

D2739

Manufactured No

160

Each

2.0000

1

1



350 I Beam



Location

Loc Qty

Loc Code

LG

61637

2

61256

2

D3490-3

Manufactured No

160

Each

47.0000

4

4



Cross Bolt Spacer



Location

Loc Qty

Loc Code

LG

47

60294

10

61218

37

D3490-1

Manufactured No

160

Each

85.0000

4

4



Cross Bolt Spacer



Location

Loc Qty

Loc Code

LG

85

59424

3

61217

82

8 BE 10/09/13

1 BB 10/09/08

4 BE 10/09/13

4 BE 10/09/13

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Start Date: 8/30/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-225

Purchased

No

220

Each

5,418.000

38

38



Insert

Location

Loc Qty

Loc Code

PK011

5418

110768

5418

D3492-041

Manufactured

No

230

Each

57.0000

8

8



Plug Assembly

Location

Loc Qty

Loc Code

FP013

57

59114

1

61311

56

B 61649

x8

D3793-3

Manufactured

No

230

Each

14.0000

1

1



Wearshoe

Location

Loc Qty

Loc Code

FP18

13

59631

1

61258

12

FP19

1

57947

1

AN8C35A

Purchased

No

230

Each

41.0000

1

1



BOLT

Location

Loc Qty

Loc Code

FP

1

110847

1

ST346

40

114442

15

115188

25

x1

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Shop Packet Print

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Start Date: 8/30/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

D3793-1

Manufactured No

230

Each

15.0000

1

1



Wearshoe



HL 10/09/21

Location

Loc Qty

Loc Code

FP18

15

59151

1

59630

2

61244

12

YI

D3488-041

Manufactured No

230

Each

10.0000

1

1



Blade Fitting Assembly, LH



HL 10/09/21

Location

Loc Qty

Loc Code

FP

7

63915

7

YI

FP007

3

56052

3

D3794-3

Manufactured No

230

Each

12.0000

1

1



Gasket



HL 10/09/21

Location

Loc Qty

Loc Code

FP10

1

60826

1

FP18

11

66066

10

59153

1

YI

Monday, August 30, 2010 11:24:12 AM

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Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 5

Monday, August 30, 2010 11:24:12 AM

Work Order ID: 61567

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 8/30/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

AN6C44A

Purchased

No

230

Each

129.0000

4

4



BOLT



10/09/21

Location

Loc Qty

Loc Code

FG

2

103964

2

ST344

127

111649

2

114653

1

114941

75

15030

49

X4

MS21083C8

Purchased

No

230

Each

30.0000

1

1



NUT



10/09/21

Location

Loc Qty

Loc Code

ST303

30

113845

7

14934

23

X1

D3536-25

Manufactured

No

230

Each

11.0000

1

1



Gasket



10/09/21

Location

Loc Qty

Loc Code

FP12

11

59625

11

1361707

X1

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Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Monday, August 30, 2010 11:24:12 AM

Page 6

Work Order ID: 61567

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 8/30/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

D3631-1 Manufactured No

230 Each

475.0000 8 8



Washer



10/09/21

Location

Loc Qty

Loc Code

ST072

201

60755

201

28

ST076

274

52693

206

54388

68

D3791-1 Manufactured No

230 Each

9.0000 1 1



Wearplate



10/09/21

Location

Loc Qty

Loc Code

FP17

9

58573

8

21

59626

1

AN960C10L Purchased No

230 Each

155.0000 38 38



washer



10/09/21

Location

Loc Qty

Loc Code

ST245

155

1115698

238

107534

29

109545

54

111548

72

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Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Monday, August 30, 2010 11:24:12 AM

Page 7

Work Order ID: 61567



Parent Item: D350-636-011



Parent Item Name: Skidtube LH

Start Date: 8/30/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

D2745

Manufactured No

230 Each

173.0000 8 8



Bushing



YH 10/09/21

Location

Loc Qty

Loc Code

ST023

173

52311

5

59112

68

61203

100

x8

AN3C5A

Purchased No

230 Each

1,072.000 34 34



Bolt



YH 10/09/21

Location

Loc Qty

Loc Code

ST350

1062

114330

11

115015

251

115108

300

115316

300

115371

100

115422

100

x34

ST351

10

113121

10

D3537-1

Manufactured No

230 Each

8.0000 3 3



Wearpad



YH 10/09/21

Location

Loc Qty

Loc Code

FP

1

55465

1

360641

x3

FP017

48

FP17

7

57713

3

60491

4

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Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Monday, August 30, 2010 11:24:12 AM

Page 8

Work Order ID: 61567

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 8/30/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

AN960C816L Purchased No 230 Each 0.0000 1 1
 WASHER *NAS 1149C08332R/M114915
 D3492-043 Manufactured No 230 Each 23.0000 8 8
 Plug Assembly

Location

Loc Qty

Loc Code

FP 54682
 FP013 59117
 59190
 61207

2
 2
 21
 1
 4
 16

B61503

x8

AN3C6A Purchased No 230 Each 353.0000 4 4
 BOLT

Location

Loc Qty

Loc Code

ST351

353
 353

111982

230 Each 103.0000 8 8

103.0000

y4

NAS1611-013 Purchased No
 O-RING

Location

Loc Qty

Loc Code

FP 114451
 115460

103
 3
 100

M115589

 y8

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Page 8

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Monday, August 30, 2010 11:24:12 AM

Page 9

Work Order ID: 61567

Parent Item: D350-636-011


Parent Item Name: Skidtube LH

Start Date: 8/30/2010


Required Date: 9/6/2010

Start Qty: 1.00


Required Qty: 1.00

D3535-25 Manufactured No 230 Each 10.0000 1 1

 Wearshoe


Location Loc Qty Loc Code
 FP18 10 B61706
 59623 10

D3794-1 Manufactured No 230 Each 7.0000 1 1

 Gasket

Location Loc Qty Loc Code
 FP010 7
 57942 7

MS21043-6 Purchased No 230 Each 678.0000 4 4

 NUT

Location Loc Qty Loc Code
 ST301 678
 112314 678

D3493-1 Manufactured No 260 Each 34.0000 2 2

 Washer

Location Loc Qty Loc Code
 ST065 34
 59127 4
 60873 30

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Page 9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Monday, August 30, 2010 11:24:12 AM

Page 10

Work Order ID: 61567

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 8/30/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

MS21083C8

Purchased

No

260

Each

30.0000

1

2



NUT

Location

Loc Qty

Loc Code

ST303

30

113845

7

114934

23

AN8C21A

Purchased

No

260

Each

43.0000

2

2



BOLT

Location

Loc Qty

Loc Code

ST345

43

113558

3

114653

40

AN960C816L

Purchased

No

260

Each

0.0000

1

2



WASHER

D3672-1

Manufactured

No

230

Each

921.0000

4

4



Phenolic Washer

Location

Loc Qty

Loc Code

ST077

921

42329

150

52505

771

D2741

Manufactured

No

260

Each

14.0000

1

1



Blade, 350 Skidtube

Location

Loc Qty

Loc Code

ST466

14

57949

14

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Page 10

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Monday, August 30, 2010 11:24:12 AM

Page 11

Work Order ID: 61567

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 8/30/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

D3532-1

Manufactured No

260 Each

19.0000

2

2



Spacer



10/9/22 SP

Location

Loc Qty

Loc Code

ST068

19

60510

19

D3672-13

Purchased No

260 Each

828.0000

2

2



Phenolic Washer



10/9/22 SP

Location

Loc Qty

Loc Code

ST077

828

54363

828

10/9/22 SP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8 7 6 5 4 3 2 1

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1			D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C8A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. *61547*
8810-8-30

RELEASED

GENERAL NOTES:

- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

F	INCORPORATE DSI 9413: QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/3 REPLACES D3535-13/35 (ZN C8-1); D3794-1/3 REPLACES D3536-13/35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741; QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/8157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN	<i>RAH</i>	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED	<i>RAH</i>	DRAWING NO.	REV. F
MFG. APPR.	<i>RAH</i>	D2750	SHEET 1 OF 11
APPROVED	<i>RAH</i>	TITLE	SCALE
DE APPR.	<i>RAH</i>	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

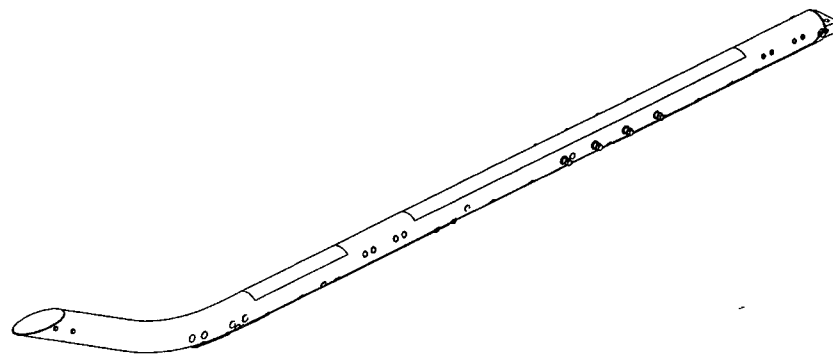
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

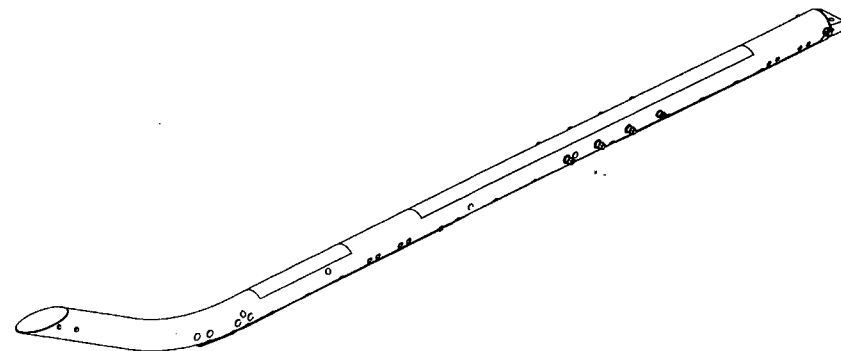
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

w/6 61567



D2750-041 350 SKIDTUBE ASSEMBLY, LH



D2750-042 350 SKIDTUBE ASSEMBLY, RH

RELEASED
18 09 22 1994

DESIGN	PC	DART AEROSPACE USA, INC.	
DRAWN	AM	PORT HADLOCK, WA	
CHECKED	AM	DRAWING NO.	REV. F
MFG. APPR.	AM	D2750	SHEET 2 OF 11
APPROVED	AM	TITLE	SCALE
DE APPR.	AM	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	COPYRIGHT © 1988 BY DART AEROSPACE USA, INC. <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

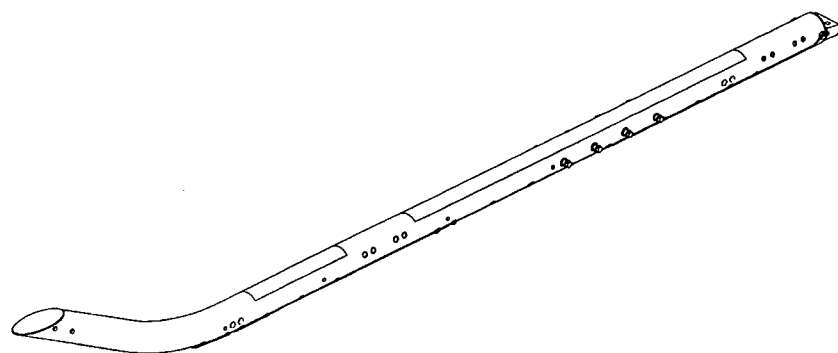
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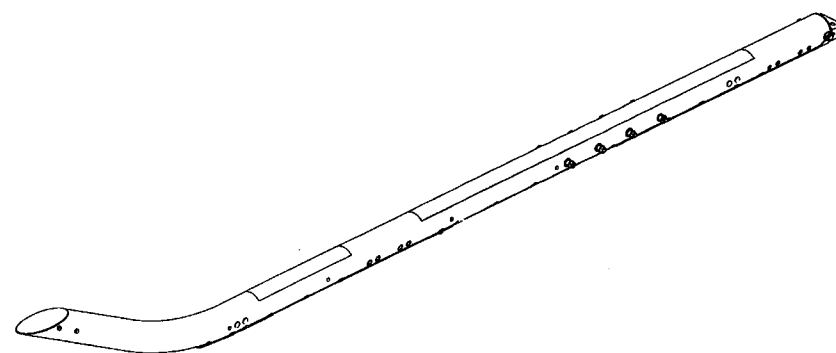
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

W/O 61367



D2750-043 350 SKIDTUBE ASSEMBLY, LH



D2750-044 350 SKIDTUBE ASSEMBLY, RH

RELEASED
08.09.22/111

DESIGN	PH	DART AEROSPACE USA, INC.	
DRAWN	PH	PORT HADLOCK, WA	
CHECKED	SA	DRAWING NO.	REV. F
MFG. APPR.	SA	D2750	SHEET 3 OF 11
APPROVED	SA	TITLE	SCALE
DE APPR.	SA	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	<small>COPYRIGHT © 1988 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

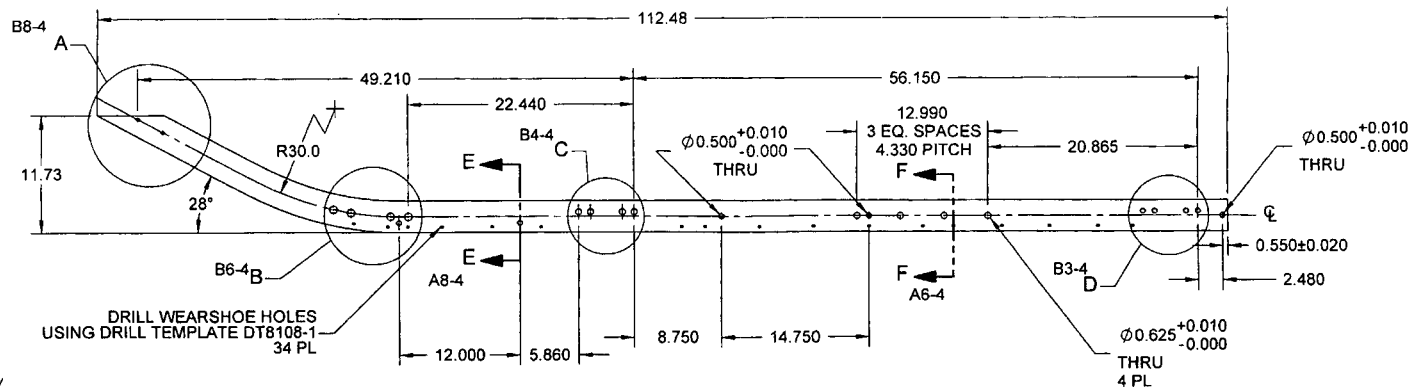
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

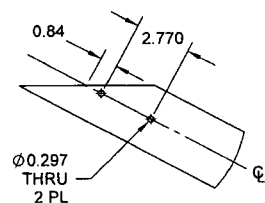
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

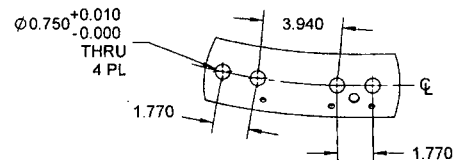
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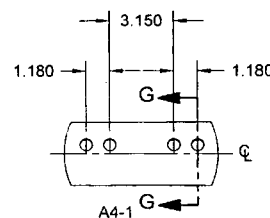
D2750-1 LH SKIDTUBE



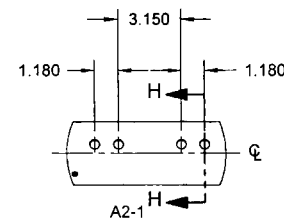
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SCALE 2X



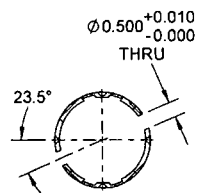
DETAIL B
SCALE 2X



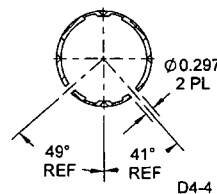
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SCALE 2X



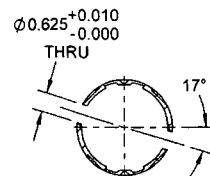
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SCALE 2X



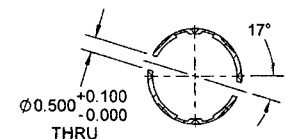
SECTION E-E
SCALE 3X, 2 PL



SECTION F-F
SCALE 3X, 17 PL



SECTION G-G
SCALE 3X, 4 PL



SECTION H-H
SCALE 3X, 4 PL

RELEASED

DESIGN	PA	DART AEROSPACE USA, INC.	
DRAWN	PA	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 4 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	<small>COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

Dart Aerospace Ltd

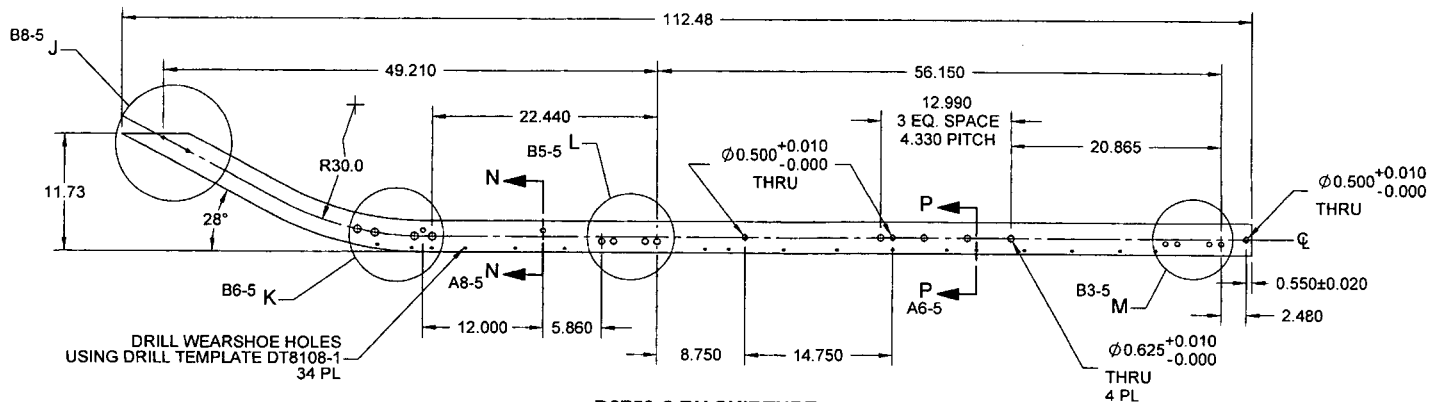
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

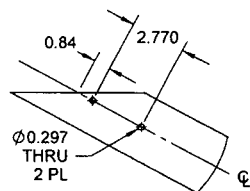
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

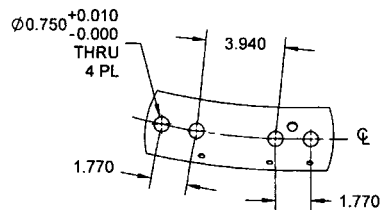
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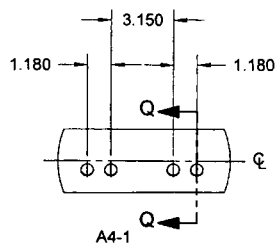
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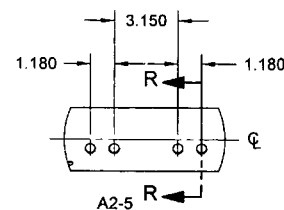
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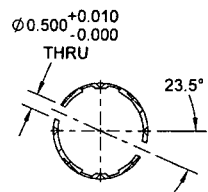
DETAIL K
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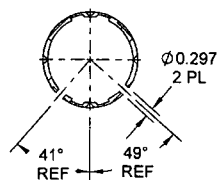
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SCALE 2X



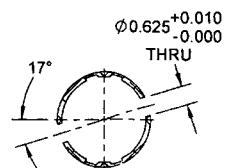
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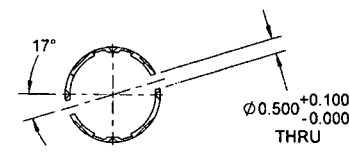
SECTION N-N
SCALE 3X, 2 PL



SECTION P-P
SCALE 3X, 17 PL



SECTION Q-Q
SCALE 3X, 4 PL



SECTION R-R
SCALE 3X, 4 PL

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DESIGN	REV	DART AEROSPACE USA, INC.	
DRAWN	REV	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 5 OF 11
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval, QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8

7

6

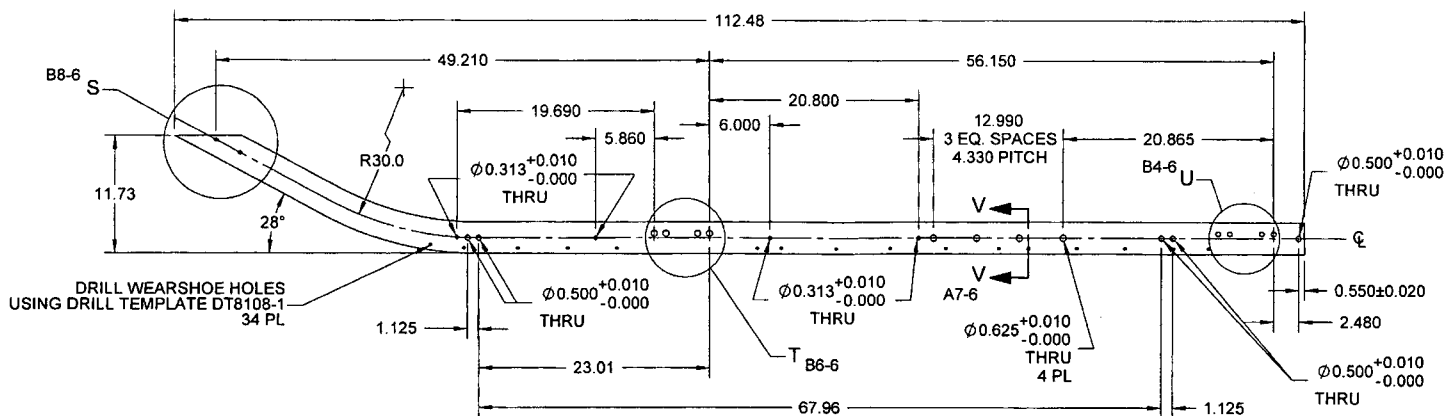
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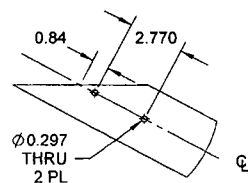
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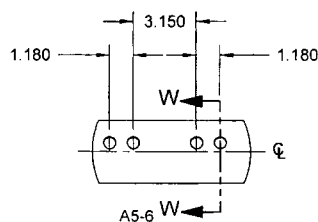
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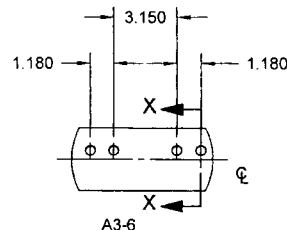
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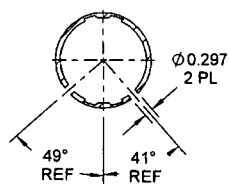
DETAIL S
SCALE 2X



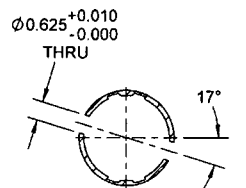
DETAIL T
SCALE 2X



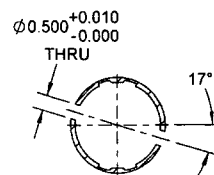
DETAIL U
SCALE 2X



SECTION V-V
SCALE 3X, 17 PL



SECTION W-W
SCALE 3X, 4 PL



SECTION X-X
SCALE 3X, 4 PL

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DESIGN		DART AEROSPACE USA, INC.
DRAWN		PORT HADLOCK, WA
CHECKED		DRAWING NO. D2750
MFG. APPR.		REV. F
APPROVED		SHEET 6 OF 11
DE APPR.		TITLE 350 SKIDTUBE ASSEMBLY
DATE	08.07.16	SCALE NTS

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w/06/15/07

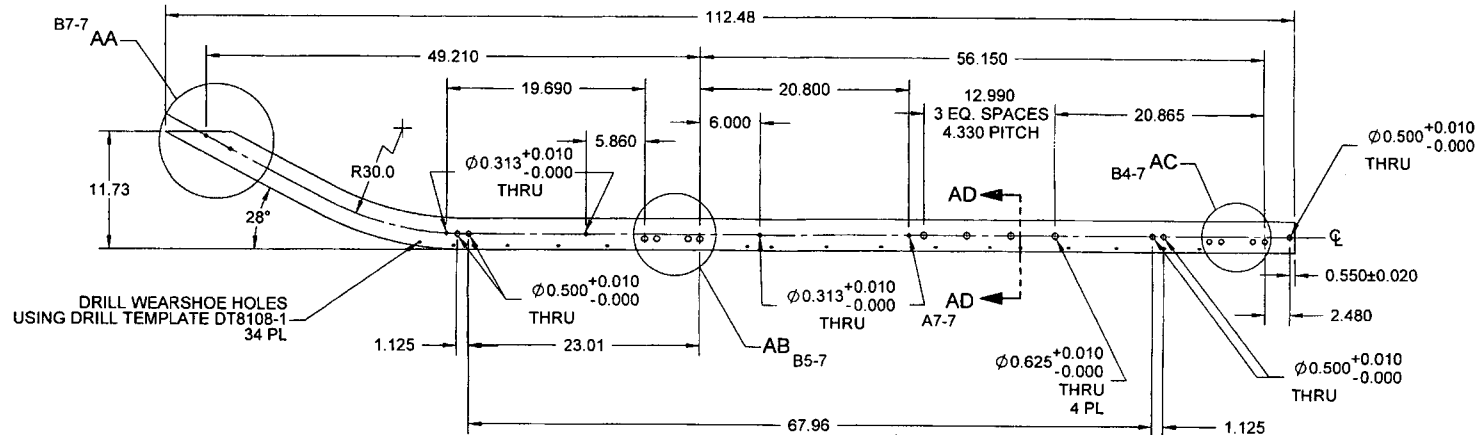
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

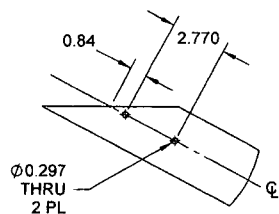
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

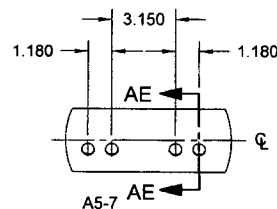
NOTE: Date & initial all entries



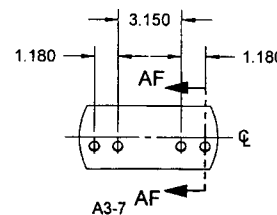
D2750-4 RH SKIDTUBE



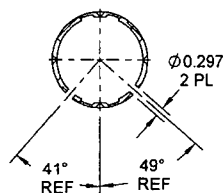
DETAIL AA
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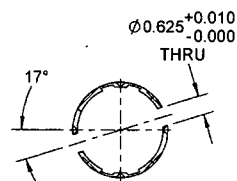
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SCALE 2X



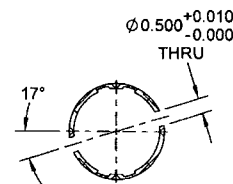
DETAIL AC
SCALE 2X



SECTION AD-AD
SCALE 3X, 17 PL



SECTION AE-AE
SCALE 3X, 4 PL



SECTION AF-AF
SCALE 3X, 4 PL

RELEASED

DESIGN	AD	DART AEROSPACE USA, INC.	
DRAWN	AD	PORT HADLOCK, WA	
CHECKED	AD	DRAWING NO.	REV. F
MFG. APPR.	AD	D2750	SHEET 7 OF 11
APPROVED	AD	TITLE	SCALE
DE APPR.	AD	350 SKIDTUBE ASSEMBLY	
DATE	08.07.16	NTS	
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

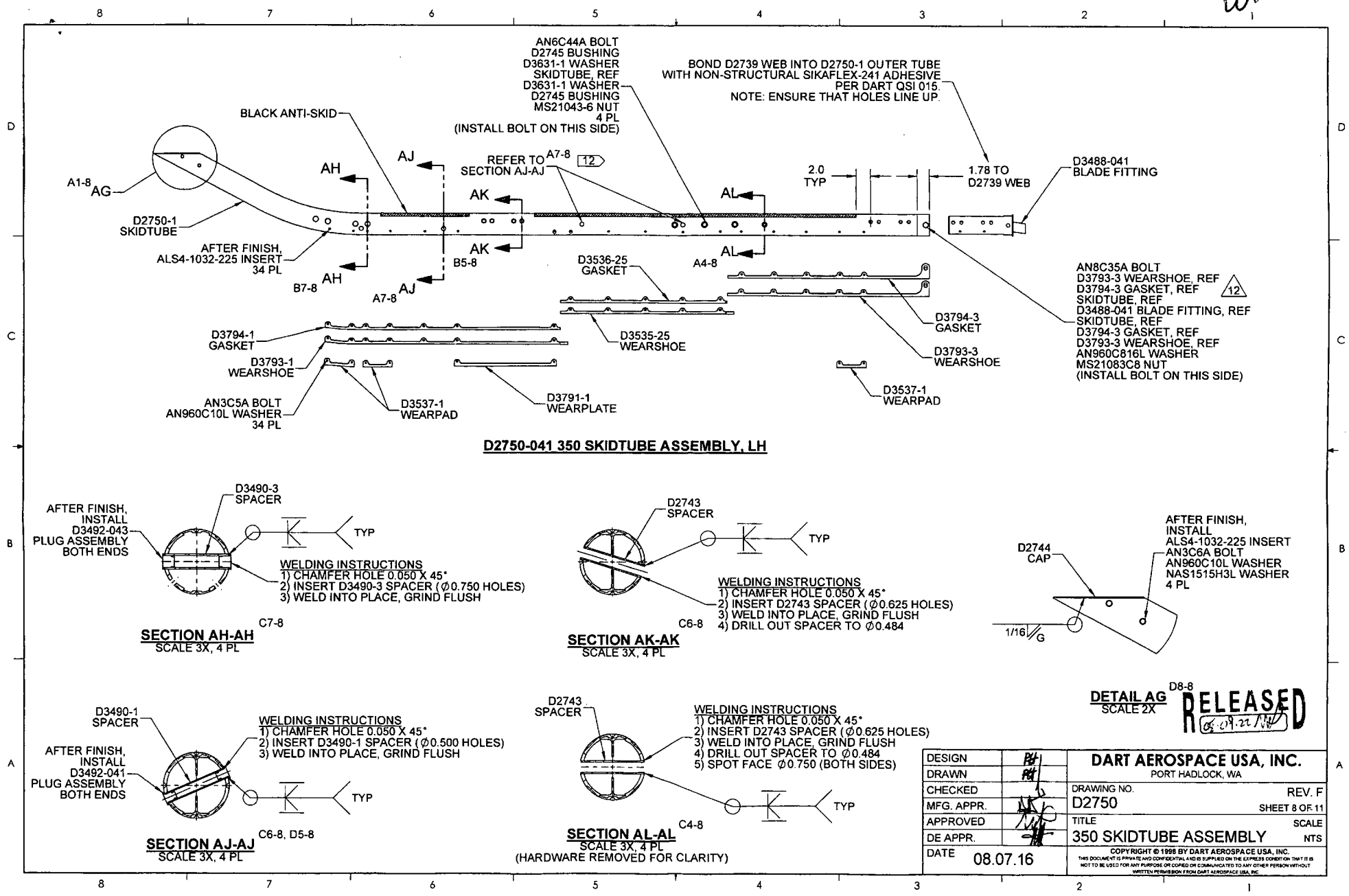
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

WLO 61567



RELEASED
D8-8
DETAIL AG
SCALE 2X

DESIGN	PH	DART AEROSPACE USA, INC.	
DRAWN	PH	PORT HADLOCK, WA	
CHECKED	PH	DRAWING NO.	REV. F
MFG. APPR.	PH	D2750	SHEET 8 OF 11
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

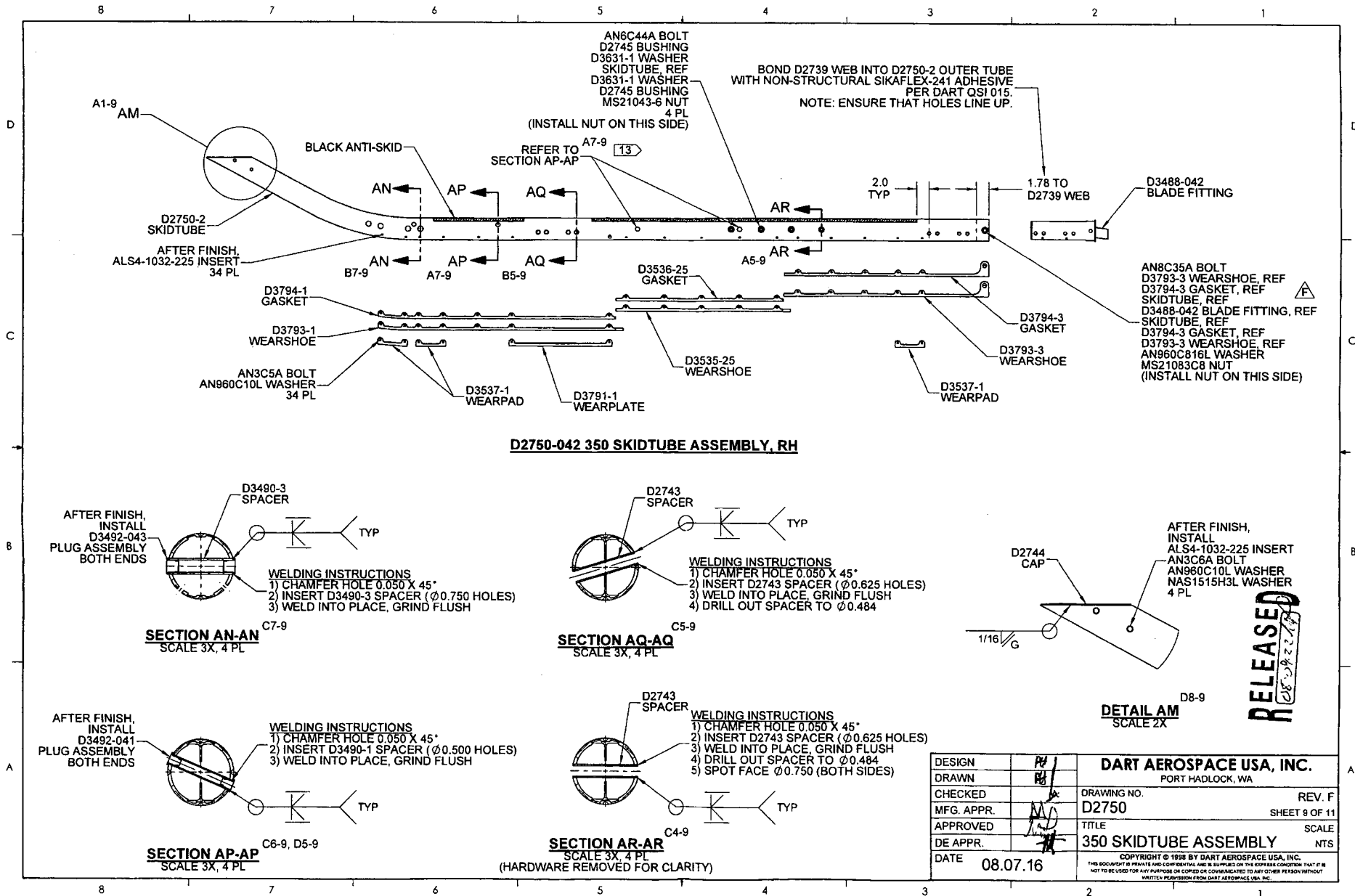
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

w/061547



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

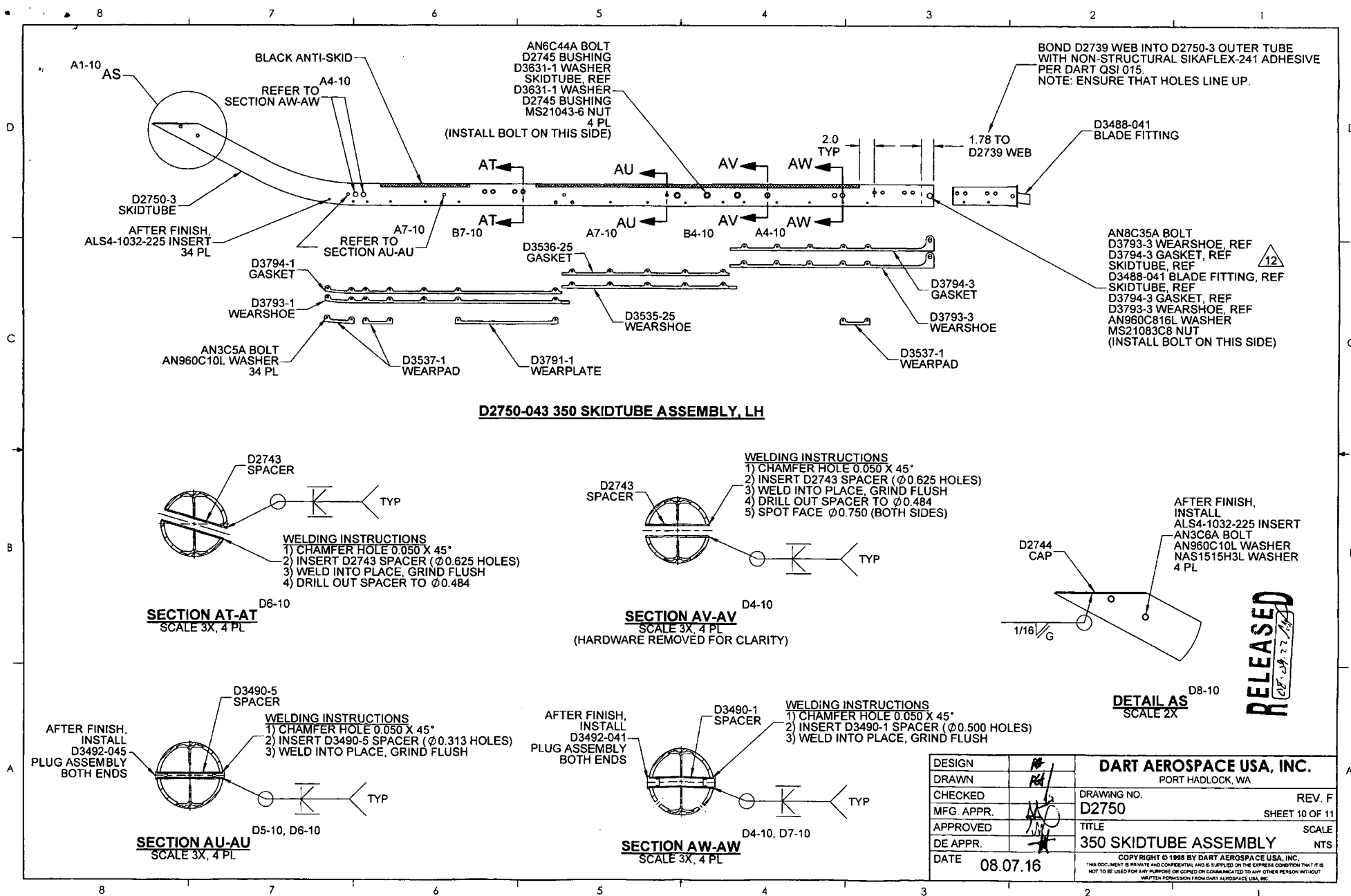
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

rel 6/15/67



DESIGN	18	DART AEROSPACE USA, INC.	
DRAWN	18	PORT HADLOCK, WA	
CHECKED	18	DRAWING NO.	REV. F
MFG. APPR.	18	D2750	SHEET 10 OF 11
APPROVED	18	TITLE	SCALE
DE APPR.	18	350 SKIDTUBE ASSEMBLY	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

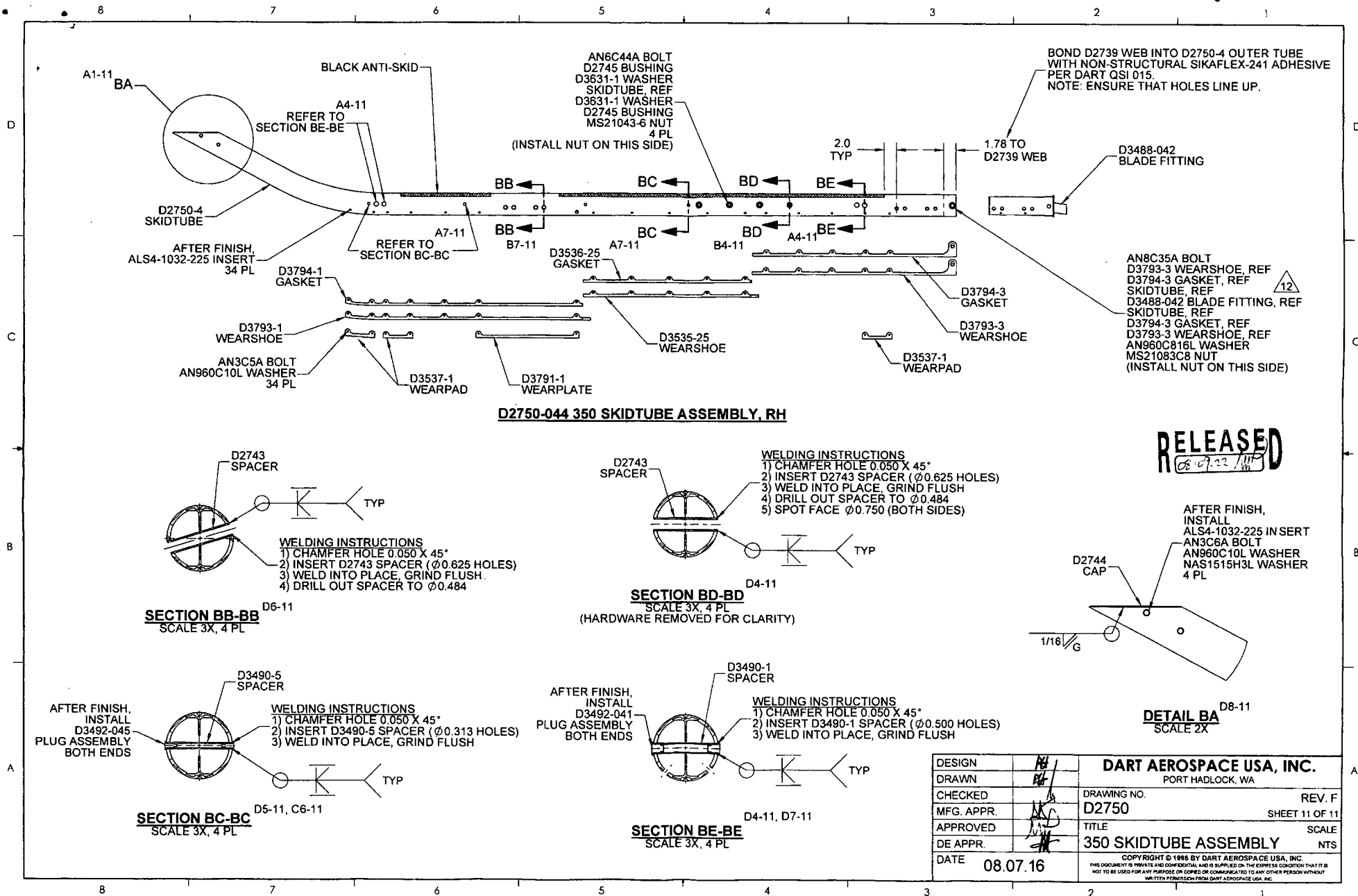
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

W061567



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 236

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 60988
Part number: D350-636-012
Description: 350 skid tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminium
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier [Signature] Date of Test Coupon 10.08.12

Welder [Signature] Date of Test Coupon 10.08.12

The above named individual is qualified in accordance with AWS D17.1.2001 to weld